Johnson & Johnson Innovation Announces Finalists of Cognition Challenge

$100,000 awarded for solutions addressing Alzheimer's disease and cognitive disorders

SAN FRANCISO (July 10, 2013) — In a collaboration led by its California Innovation Center, Johnson & Johnson Innovation today announced the finalists of the Cognition Challenge. The Cognition Challenge, a program supported by the Consulate General of Canada in partnership with Johnson & Johnson Innovation and its affiliate Janssen Research & Development, LLC, is a crowd-sourcing inspired challenge that invited Canadian researchers and entrepreneurs to submit their solutions to address problems of learning and memory related to Alzheimer's disease and cognitive disorders.

The two finalists will each receive $50,000 from Johnson & Johnson Innovation to help them further research and develop their solutions as well as office and lab space for up to six months at the Canadian Technology Accelerator in San Francisco, a startup incubator supported by the Consulate General of Canada. Finalists will also benefit from consultation with technology and disease experts from Johnson & Johnson's California Innovation Center. The entrepreneurs retain their independence and ownership of their business concepts.

"The Cognition Challenge inspired high-quality, novel approaches to cognition and Alzheimer's disease and we congratulate the finalists for their exemplary ideas," said Diego Miralles, M.D., head, Johnson & Johnson California Innovation Center. "The California Innovation Center looks forward to collaborating with these entrepreneurs in our effort to spur early-stage innovation through collaboration."

The two projects selected as finalists of the Cognition Challenge are:

3D Nuclear Telomere Imaging in Alzheimer's Disease, submitted by Sabine Mai, Ph.D., professor, Manitoba Institute for Cell Biology, Manitoba, Canada: a 3D imaging-based method to distinguish mild, moderate and severe Alzheimer's patients from age-matched controls. The method involves obtaining cells from cheek swabs and determining telomere cell signatures using 3D nuclear imaging and quantitative software developed at the Manitoba Institute for Cell Biology.

CanDo: A Smart App for Cognition, submitted by Celina Berg, Ph.D., postdoctoral fellow, CanAssist, Victoria BC, Canada: a series of apps designed to improve the quality of life for people with cognitive disabilities by providing users with customized visual aids with ambient feedback and an easy-to-program planning interface for caregivers. One app will help users to break down tasks into simple steps using visual aids such as photos. The user or caregiver takes pictures of each step and then saves them for later use. The app also will include a wayfinding and tracking tool, and will leverage ambient feedback in the form of colors, music or avatars to help customize the user experience.

"The quality of proposals submitted by Canadian researchers and entrepreneurs highlights the strength and potential of the burgeoning biotech sector in Canada," said Cassie Doyle, Consul General of Canada in San Francisco. "We are confident that our Canadian Technology Accelerator will help these Canadian researchers to further develop their innovative ideas to address Alzheimer's disease and cognitive disorders."

The Cognition Challenge received 45 submissions, which were narrowed down to four semi-finalists who consulted with experts from the Johnson & Johnson California Innovation Center in preparing their final proposals. In addition to the two finalists, the following two semi-finalists were also recognized for their outstanding submissions:

Eyecelerate, submitted by Mohammad Najafi, Ph.D. candidate, CTO and Narges Afsham, Ph.D. candidate, CEO, NMotive Research, Inc., Vancouver BC, Canada: Eyecelerate provides a gaze-enhanced interface for handheld devices that can be used for early detection of Alzheimer's disease. Patients with Alzheimer's disease have an abnormality in automatic, but not controlled visuospatial attention. Studies have shown that eye gaze detection can be utilized as a preclinical marker for early detection of the disease. Eyecelerate tracks the user's gaze with a front-facing camera, which detects and measures the rapid movements of the eye while the user performs a visual task.

PrediCog: Prediction of Cognitive Clinical Outcome of Preterm Babies from Diffusion MRI, submitted by Ghassan Hamarneh, Ph.D., professor, Simon Fraser University, Burnaby BC, Canada: PrediCog proposes creating software that quantifies brain connectivity using diffusion MRI datasets and connectivity patterns to highlight white matter abnormalities, and predict cognitive outcomes in premature infants. Detecting white matter abnormalities earlier in pregnancy allows for earlier rehabilitation and intervention options, and ultimately improves the prognosis and cognitive outcome of prematurely born babies. The team is developing mathematical models, computer algorithms and software that allows pediatric neuroradiologists to assess levels of white matter injury in babies born prematurely and predict (or manage) cognitive clinical outcomes, both from structural and diffusion MRI scans.

Semi-finalists presented their final proposals on July 9, 2013 at the Challenge Forum in San Francisco. The finalists were selected by the judging panel, which included Lennart Mucke, director, neurological disease, Gladstone Institute; Karoly Nikolich, CEO, Circuit Therapeutics; and Nancy Stagliano, CEO, iPierian.

The Janssen Pharmaceutical Companies of Johnson & Johnson have a longstanding legacy of advancing neuroscience research dating back to the 1950s, when Dr. Paul Janssen's discovery and development work led to one of the first breakthrough treatments for schizophrenia. Over the last half century, Janssen has discovered, developed and launched many innovative treatments for brain and central nervous system (CNS) conditions. Globally, Janssen has committed more than $12 million annually to public and professional education sponsorships and philanthropy in the field of neuroscience and mental health.

About Janssen Research & Development

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About Johnson & Johnson Innovation

The California Innovation Center is part of Johnson & Johnson Innovation, a division of Johnson & Johnson Finance Corporation. The center is one of four regional hubs being established in the world's leading life science innovation hotspots, including Boston, Shanghai and London. Johnson & Johnson Innovation focuses on accelerating early innovation and enhancing opportunities for collaboration and investment across Johnson & Johnson's global healthcare businesses. Johnson & Johnson Innovation provides scientists, entrepreneurs and emerging companies focused on early-stage opportunities a one-stop access to science and technology experts who can facilitate collaborations across the pharmaceutical, medical device and diagnostics and consumer companies of Johnson & Johnson. Johnson & Johnson Innovation includes local deal-making capabilities with the flexibility to adapt deal structures to match early-stage opportunities and establish novel collaborations that speed development of those innovations to solve unmet needs in patients. Follow us @jnjinnovation on Twitter. More information can be found here: www.jnjinnovation.com.

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